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Abstract

In present era the technology of adaptive array is maturing rapidly and a choice of fairly sophisticated and versatile techniques are available. These adaptive array techniques are useful in not only suppressing the jammers but also have potential application in civil mobile communications and broadcasting. However, there are some issues concerning the uniqueness and optimization of adapted pattern in the presence of jammers. The present work involves the study of these fundamental issues related to the performance of adaptive arrays in suppressing the interfering signals. Effects of various parameters, viz. number of interfering signals, power level of the jammers, jammer location with respect to the quiescent beam pattern, source bandwidth, jammers with continuous source distributions and beam steering are analyzed. The results are computed using two classical techniques, viz. the retrodirective eigenvector approach and the steady-state analysis.